The opinion in support of the decision being entered today was *not* written for publication in and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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*Ex parte* CELSO LUIS MELLO, JONATHAN SPINELLI, JEFF HASTINGS, EDWARD CURVINO, GERRIT LACHAERT, DAVID LEAH, and GEOFF O. MORRIN

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Appeal 2007-2240
Application 09/818,016
Technology Center 3600

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Decided: July 17, 2007

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Before WILLIAM F. PATE, III, STUART S. LEVY, and ANTON W. FETTING, *Administrative Patent Judges.*

FETTING, *Administrative Patent Judge.*

## DECISION ON APPEAL

## STATEMENT OF CASE

This appeal from the Examiner's rejection of claims 1-8, 10, 12-16, 18, and 20, the only claims pending in this application, arises under 35 U.S.C. § 134. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

## BACKGROUND

This invention generally relates to assisting an elevator mechanic at managing daily activities and completing work assignments. Elevator systems often require maintenance or, in some instances, repair. Elevator mechanics typically travel to many different locations to service the various elevators as needed. During a typical day, a mechanic must travel to various locations, perform different types of maintenance or repair tasks, obtain various kinds of technical information and maintain billing record information. (Specification 1.)

In general terms, the Appellants invented a system that assists an elevator mechanic in completing the various tasks required during a normal work day. A system designed according to this invention plans out a recommended list of tasks for the mechanic to complete during the work day; provides the mechanic information regarding items associated with the recommended list of tasks; facilitates communication between the mechanic and a base location; and allows the mechanic to remotely interact with planning, information and communication modules, respectively. (Specification 1-2.)

An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

> 1. A system for automatically and remotely assisting an elevator mechanic, comprising:
>
> a planning module that automatically plans out a recommended list of tasks for the mechanic to complete during a workday;
>
> an information module that automatically provides the mechanic information regarding items associated with the recommended routine;

a communication module that facilitates communication between the mechanic and a base location for providing the mechanic an indication of a special service request, for allowing the mechanic to selectively accept an assignment of the special service request and for allowing the mechanic to communicate whether the mechanic accepts the assignment to the base location; and

a portable mechanic interface that is operative to allow the mechanic to remotely access information from or provide information to the planning, information and communication modules, respectively.

This appeal arises from the Examiner's Final Rejection, mailed August 8, 2005. The Appellants filed an Appeal Brief in support of the appeal on January 12, 2006, and the Examiner mailed an Examiner's Answer to the Appeal Brief on April 3, 2006. A Reply Brief was filed on June 5, 2006.

## PRIOR ART

The Examiner relies upon the following references as evidence of unpatentability:

| | | |
|---|---|---|
| Bergeron | US 4,922,514 | May 1, 1990 |
| Lesaint | US 6,578,005 B1 | Jun. 10, 2003 |

## REJECTIONS

Appellants seek review of the following Examiner's rejections.

Claims 1-8 and 10 stand rejected under 35 U.S.C. § 103(a) as obvious over Lesaint and Bergeron.

Claims 12-16, 18, and 20 stand rejected under 35 U.S.C. § 103(a) as obvious over Lesaint.

## ISSUES

With respect to the obviousness rejection over Lesaint and Bergeron, the Examiner finds that Lesaint discloses a system for automatically and remotely assisting a mechanic, with a planning module that automatically plans out a recommended list of tasks for the mechanic to complete during a workday; an information module that automatically provides the mechanic information regarding items associated with the recommended routine; a communication module that facilitates communication between the mechanic and a base location for providing a mechanic an indication of a special service request and for allowing the mechanic to communicate to indicate whether the mechanic accepts the assignment to the base location; and a portable mechanic interface that is operative to allow the mechanic to remotely access information from the planning, information and communication modules, respectively. (Answer 4-5.)

The Examiner finds that while Lesaint discloses a field force mechanic for performing tasks and the system for said mechanic that includes the elements recited above, Lesaint does not expressly disclose that the mechanic is an elevator mechanic. Furthermore, while Lesaint discloses prioritizing tasks and reallocating tasks, the mechanic being able to take absence on short notice, and two-way communication between a portable device and a base location, Lesaint does not expressly disclose allowing a mechanic to selectively accept an assignment of the special service request. (Answer 5.)

To overcome the assignment acceptance deficiency, the Examiner finds that Bergeron discloses communicating an assignment with a remote mechanic or engineer and allowing a mechanic to selectively accept an assignment of the

special service request. The Examiner further finds that Bergeron and Lesaint both disclose assigning field service workers to sites, based on priority, using remote communications. Bergeron further discloses allowing the field service worker to accept or reject the assignment. (Answer 5-6.)

Thus, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to include allowing the field mechanic of Lesaint to accept or reject a communicated task in order to more efficiently produce schedules that benefit the service company by assigning the most suitable and available field mechanic to the task. The Examiner supports this conclusion with the rationale that allowing the technician to directly input his/her ability to perform a task would increase the efficiency of this process. (Answer 6.)

To overcome the elevator mechanic deficiency, the Examiner finds that Lesaint discloses a system that allocates tasks to field mechanics using remote communications. The Examiner points out that the term "elevator" only appears in the preamble of the claim and has no functional effect on the body of the claim (i.e., the mechanic being an elevator mechanic is the intended field use and the elements in the body of claim are structurally the same regardless of the industry in which they are applied). Thus, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the system of Lesaint to assign mechanics to tasks concerning elevators in order to more efficiently allocate a plurality of field mechanics to a plurality of tasks in an industry with dynamic conditions. (Answer 6.)

The Appellants contend that none of the claims are obvious because the motivation required under 35 U.S.C. §103 for modifying the Lesaint reference as proposed by the Examiner does not exist. The Appellants argue that it is important

to consider what the teachings of that base reference are in order to determine whether there is any motivation for making the proposed modification. The Appellants conclude that where there is no benefit to making a proposed modification, the legally required motivation to establish a prima facie case is absent. (Br. 6-7.)

The Appellants contend that Lesaint is primarily concerned with a scheduling algorithm. That reference deals with setting up schedules for service personnel in a particular manner to achieve particular objectives. They contend that there is no benefit to modify the teachings of Lesaint incorporate additional features, because it does not enhance, in any way, the scheduling algorithm or technique of Lesaint's teachings. The Appellants also contend that the proposed modifications to Lesaint do not in any way facilitate achieving the objectives stated in the Lesaint reference. In other words, there is no teaching or suggestion from within the references for making the Examiner's proposed combination. The Appellants again note that the Lesaint reference is concerned primarily with a rule based and stochastic scheduling algorithm for efficiently distributing tasks based on available resources. They contend that the way in which that algorithm operates is not in any way enhanced by incorporating the teachings from the Bergeron reference relied upon by the Examiner when attempting to establish a prima facie case of obviousness against claims 1-8 and 10. (Br. 7.)

The Appellants argue that adding a rejection or acceptance feature from the Bergeron reference does not provide any benefit to the arrangement in the Lesaint reference because it does not make that system any more efficient to reach its intended objectives, and, in fact, it appears at least somewhat contrary to the intentions of Lesaint, which assumes that once an appropriate individual "reports

in," or "calls in," that individual will be assigned the task in question. There is no discussion anywhere within Lesaint about giving an individual the option of accepting or rejecting a task. The Appellants conclude that Lesaint appears to prefer the arrangement described in that document to enhance the efficiencies of the scheduling algorithm, and that without some benefit extending from a proposed combination (absent Applicant's own teachings regarding making such an arrangement), there is no motivation and no prima facie case of obviousness. (Br. 7.)

As to claim 4 in particular, the Appellants contend that there is nothing in either reference or the proposed combination of them that updates a status of a task responsive to information from a tracking device. The Appellants contend that although the Examiner points to several portions of Lesaint allegedly teaching such an approach, none of those cited portions teach that. The Appellants admit that the closest is the teaching in column 11 at lines 10-30 but they argue that does not teach that the status information is based upon information from a tracking device. (Br. 8.)

The Examiner responds that both Bergeron and Lesaint disclose assigning field service workers to sites, based on priority, using remote communications. Therefore, both applications are in the same field of endeavor. Lesaint further discloses generating an initial schedule and updating the schedule as more and more data becomes available and that the system knows whether the assigned mechanic has called in and taken on the request or if the request should be assigned elsewhere. On the other hand, Bergeron discloses allowing the worker to actively accept or reject the assignment. (Answer 14-15.)

Therefore, the Examiner concludes that since Lesaint considers a technician's preferred work area and ability to complete the task (i.e. are they available, have they checked in, are they absent/taking leave), and iteratively updates schedules of mechanics as new information becomes available, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow the field mechanic of Lesaint to accept or reject a communicated task, as is done by field engineers in Bergeron, in order to more efficiently produce schedules. (Answer 14-15).

With respect to the obviousness rejection over Lesaint alone, the Examiner finds that Lesaint shows those teachings similarly found regarding the obviousness rejection over Lesaint and Bergeron, *supra.*, and also that the claim element of an elevator mechanic is a field of use limitation in the preamble having no structural limitation on the claim. The Examiner also takes official notice of the notoriety of billing for commercial services rendered, such as those services taught in Lesaint. (Answer 9-10.)

The Appellants contend that

- With respect to claims 12, the Examiner properly acknowledges that Lesaint, et al. is void of any discussion of billing. To add an all-new feature "by programming the system of Lesaint, et al. to generate the bill at the time service is rendered" as suggested by the Examiner, comes purely from the suggestion of Applicant's teachings. Billing information will not in any way enhance the scheduling efficiency of Lesaint's algorithm and, therefore, provides no benefit to that system. (Br. 9.)
- With respect to claim 13,

- The scheduling arrangement of Lesaint has no capacity for providing a mechanic information regarding items associated with a recommended routine responsive to an inquiry from the mechanic. The Examiner properly acknowledges this in making the proposed combination with Bergeron in the rejection applied against claim 1. (Br. 9-10.)
- The Examiner appears to be taking a different position in stating that Lesaint somehow teaches determining whether a mechanic accepts an assignment. In any event, Lesaint assumes that a mechanic accepts an assignment given to it. There is no discussion within the document of giving the mechanic the freedom to accept or decline an assignment. Adding such a feature to Lesaint will not make that arrangement any more efficient in terms of scheduling out assignments to meet its intended objectives. There is no motivation for modifying Lesaint in this manner. (Br. 9-10.)

- With respect to claim 15, the Appellants present no argument, but simply register their disagreement with the Examiner's conclusion (Br. 10).
- With respect to claim 20, the Appellants repeat their contentions regarding the lack of billing information, *supra*. (Br. 10-11.)

The Examiner responds that, as regards the contention concerning "billing information", Lesaint is concerned with the customer service industry. Lesaint discloses a system that assigns mechanics to appointments for completing tasks for customers, these tasks including repairs, maintenance, field service, etc. It was old and well known in the art at the time of the invention that these are all fee for

service industries, requiring a client to pay for the services completed by a service provider, such as a field technician. (Answer 16.)

The Examiner concludes that since Lesaint disclosed reporting the completion of a service, it would have been obvious to one of ordinary skill in the art at the time of the invention to automatically bill clients for the tasks performed by field technicians after the task is reported as completed in order to generate bills in a more timely manner by programming the system of Lesaint to generate the bill at the time service is rendered, thus allowing for quicker compensation. (Answer 16.)

The Examiner cites additional prior art to support this assertion, but it is not within the scope of the basis for the Examiner's rejection, and therefore we will not consider it here.

In regard to the contention concerning the information provision, the Examiner contends that Lesaint discloses providing the mechanic with information regarding the routine to be performed, such as instructions suggested by the system, *viz.* a remote communication occurs between the mechanic and the system, whereby the instructions are communicated to the mechanic. (Answer 17.)

In regard to the contention concerning task acceptance, the Examiner contends that claim 1 and claim 13 contain different limitations. Claim 1 requires that the mechanic chooses to accept the assignment and sends a communication to the base location indicating such a selection. Claim 13 does not expressly recite this feature of choice. Rather, claim 13 merely states a mechanic accepts (i.e., receives) an assignment. Also, unlike claim 1, claim 13 recites that this acceptance is determined, rather than the mechanic actively communicating a chosen acceptance back to the system. Therefore, with regards to claim 13, the Examiner contends that Lesaint discloses a system knowing whether the assigned mechanic has called

in and taken on the request or if the request should be assigned elsewhere. (Answer 17.)

Thus, the issues pertinent to this appeal are

- Whether the rejection of claims 1-8 and 10 under 35 U.S.C. § 103(a) as obvious over Lesaint and Bergeron is proper. In particular, whether it is proper to combine the references and whether Lesaint does show updating a status of a task responsive to information from a tracking device.
- Whether the rejection of claims 12-16, 18, and 20 under 35 U.S.C. § 103(a) as obvious over Lesaint is proper. In particular, whether the claimed subject matter of billing, providing information, and accepting an assignment are shown or are otherwise obvious to add to Lesaint.

## FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF), supported by substantial evidence, are pertinent to the above issues.

*Lesaint*

01. Lesaint is directed toward optimizing the allocation of a plurality of resources to a plurality of tasks, and is particularly suited for use in situations where the availability of resources, and the tasks to be performed, both change dynamically. An example of such a situation is the allocation of tasks to a field force of personnel, for example ambulance or taxi drivers, a vehicle repair call-out field force, or a maintenance field force for a distributed system such as an electricity or

water supply system or a telecommunications network. (Lesaint, col. 1, ll. 9-19.)

02. As found by the Examiner, Lesaint discloses a system for automatically and remotely assisting a mechanic, comprising: a planning module that automatically plans out a recommended list of tasks for the mechanic to complete during a workday (Lesaint, figures 1 and 4, col. 7, ll. 1-30 and 48-55, col. 9, ll. 15-44, col. 26, ll. 55-67, col. 27, ll. 1-30, which discuss a planning module that automatically plans out the tasks for the mechanic to complete during the day); an information module that automatically provides the mechanic information regarding items associated with the recommended routine (Lesaint, figure 4 and col. 7, ll. 15-30 and 47-55, col. 9, ll. 20-44, col. 11, ll. 20-30, wherein the mechanic is provided instructions for the maintenance/task routine); a communication module that facilitates communication between the mechanic and a base location (Lesaint, figures 1 and 4, col. 6, ll. 50-65, col. 7, ll. 1-30 and 47-55, col. 9, ll. 20-44, col. 11, ll. 20-30, which discloses a communication module) for providing a mechanic an indication of a special service request and for allowing the mechanic to communicate to indicate whether the mechanic accepts the assignment to the base location (Lesaint, col. 5, ll. 15-35, wherein a mechanic is selectively provided a schedule that considers the priority (special request) of requests when the scheduling. The system determines whether the assigned mechanic has called in and accepted the request or if the request should be reassigned); a portable mechanic interface that is operative to allow the mechanic to remotely access information from the

planning, information and communication modules, respectively (Lesaint, figures 1 and 4, col. 6, ll. 50-65, col. 7, ll. 1-30 and 47-55, col. 9, ll. 20-44, col. 11, ll. 20-30, wherein the mechanic has a portable interface that operatively allows the mechanic to remotely access information).

03. Lesaint et al. teaches a tracking device that automatically provides information regarding a location of the mechanic and wherein the planning module uses the location information (Lesaint, figures 1, particularly the handheld devices, and 4, col. 8, ll. 35-62, col. 9, ll. 20-42, col. 10, ll. 5-10, col. 11, ll. 10-30, col. 13, ll. 38-45, wherein the system automatically provides status and location information to the planning module, so the schedule can continually be optimized).

04. Lesaint et al. discloses a status module that maintains information regarding a status of a task, the status module periodically updating the status of a task responsive to information from the tracking device (Lesaint, figures 1 and 4, col. 8, ll. 35-62, col. 9, ll. 20-42, col. 10, ll. 5-10, col. 1, ll. 10-30, col. 13, ll. 38-45, wherein status information is obtained and periodically updated).

05. Lesaint et al. discloses a method of automatically and remotely assisting a mechanic, comprising the steps of: (A) automatically planning out a recommended list of tasks for the mechanic to complete during a workday including selectively providing the mechanic an indication of a special service request (Lesaint, figure 4, col. 7, ll. 48-55, col. 9, ll. 15-44, col. 10, ll. 5-25, col.12, ll. 30-65, col. 26, ll. 55-67, col. 27, ll. 1-30, which discloses planning a prioritized tour for a mechanic.

Lesaint, col. 5, ll. 15-35, wherein a mechanic is selectively provided a schedule that considers the priority (special request) of the request when the scheduling and providing occurs); (B) automatically providing the mechanic information regarding items associated with the recommended routine responsive to an inquiry from the mechanic (Lesaint, at least figures 1 and 4, col. 6, ll. 50-65, col. 7, ll. 1-30 and 47-55, col. 9, ll. 20-44, col. 11, ll. 20-30, which discloses providing the mechanic with information regarding the routine to be performed); (C) facilitating remote communication between the mechanic and a base location whereby the mechanic is able to access information regarding the recommended list of step (A) and the information of step 03) (Lesaint, at least figures 1 and 4, col. 6, ll. 50-65, col. 7, ll. 1-30 and 47-55, col. 9, ll. 20-44, col. 11, ll. 20-30, which discloses a communication module that facilitates remote communication); and (D) determining whether the mechanic accepts an assignment of a special service request (Lesaint, col. 5, ll. 15-35, wherein the system determines whether the assigned mechanic has called in and accepted the request or if the request should be assigned elsewhere).

06. None of these findings in FF 01-05 are disputed by the Appellants.

*Bergeron*

07. Bergeron is directed toward the dispatch of resources, and more particularly to the dispatch of field service engineers to remote sites, and solving the problem of dispatching of resources, which can be broken down into three parts; the identification of locations requiring the resources, the proper selection of resources for assignment to the

identified locations, and communication of the assignment to the selected resources. (Bergeron, col. 1, ll. 6-14.)

08. Bergeron solves this problem by receiving alarm signals, preferably over the telephone network, from remote sites, identifying a particular site in response to an alarm signal from that site, determining an ordered list of resources designated for that site, sequentially attempting to establish, in the order determined, communications with the resources designated for the site, and cyclically continuing to attempt to establish communications until communications are established with one of the resources designated for the identified site, or until the occurrence of some other predetermined event. (Bergeron, col. 2, ll. 24-42.)

09. As the Examiner found, Bergeron discloses communicating an assignment with a remote mechanic/engineer and allowing a mechanic to selectively accept an assignment of the special service request. (Bergeron, col. 7, ll. 6-45.)

## PRINCIPLES OF LAW

*Claim Construction*

The general rule is that terms in the claim are to be given their ordinary and accustomed meaning. *Johnson Worldwide Assocs. v. Zebco Corp.*, 175 F.3d 985, 989, 50 USPQ2d 1607, 1610 (Fed. Cir. 1999). In the USPTO, claims are construed giving their broadest reasonable interpretation.

> [T]he Board is required to use a different standard for construing claims than that used by district courts. We have held that it is erroneous for the Board to "appl[y] the mode of claim interpretation

> that is used by courts in litigation, when interpreting the claims of issued patents in connection with determinations of infringement and validity." In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320 (Fed. Cir. 1989); accord In re Morris, 127 F.3d 1048, 1054, 44 USPQ2d 1023 (Fed. Cir. 1997) ("It would be inconsistent with the role assigned to the PTO in issuing a patent to require it to interpret claims in the same manner as judges who, post-issuance, operate under the assumption the patent is valid."). Instead, as we explained above, the PTO is obligated to give claims their broadest reasonable interpretation during examination.

*In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004).

*Obviousness*

These claims are under rejection for obviousness. A claimed invention is unpatentable if the differences between it and the prior art are "such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (2000); *In re Kahn*, 441 F.3d 977, 985, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, (1966)). In *Graham*, the Court held that that the obviousness analysis begins with several basic factual inquiries: "[(1)] the scope and content of the prior art are to be determined; [(2)] differences between the prior art and the claims at issue are to be ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved." 383 U.S. at 17. After ascertaining these facts, the obviousness of the invention is then determined "against th[e] background" of the *Graham* factors. *Id.* at 17-18.

The Supreme Court has provided guidelines for determining obviousness based on the Graham factors. *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). "[a] combination of familiar elements according to known methods

is likely to be obvious when it does no more than yield predictable results. *Id* at 1739, 82 USPQ2d at 1395. "When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *Id.* at 1740, 82 USPQ2d at 1396. For the same reason, "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill." *Id.* "Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir.2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at 1740-41, 82 USPQ2d at 1396. "[T]he analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at 1741, 82 USPQ2d at 1396. "The obviousness analysis cannot be confined by a formalistic conception

of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends." *Id.* "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id* at 1732, 82 USPQ2d at 1397.

*Automation of a Known Process*

It is generally obvious to automate a known manual procedure or mechanical device. Our reviewing court stated in *Leapfrog Enterprises Inc. v. Fisher-Price Inc.*, 485 F.3d 1157, 82USPQ2d 1687 (Fed. Cir. 2007) that one of ordinary skill in the art would have found it obvious to combine an old electromechanical device with electronic circuitry "to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost. . . . The combination is thus the adaptation of an old idea or invention . . . using newer technology that is commonly available and understood in the art." *Id* at 1163, 82 USPQ2d 1691.

## ANALYSIS

*Claims 1-8 and 10 rejected under 35 U.S.C. § 103(a) as obvious over Lesaint and Bergeron.*

The Appellants have argued claims 1-3, 5-8 and 10 together. Accordingly, we select claim 1 as a representative claim.

We first note that there is no contention that any of the claim elements are not met by the combined teachings of Lesaint and Bergeron (FF 06). We further note that the broadest claims are directed toward automation of the well known activities of planning, informing, communicating, providing feedback, and billing for tasks. One of ordinary skill in the art would have found it obvious to combine an old combination of basic commercial tasks with programmed electronic circuitry to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost. The combination is thus the adaptation of an old idea or invention using newer technology that is commonly available and understood in the art. (See *Leapfrog supra).*

The Appellants first argue that there is no reason to combine Lesaint and Bergeron. Both Lesaint and Bergeron are directed toward the application of resources, particularly human resources such as a field force, toward tasks. Lesaint is directed toward the optimizing the overall allocation (FF 01), whereas Bergeron is directed toward applying the best resources to spontaneous events signaled by some alarm (FF 08). Thus, Bergeron is directed toward the handling of discrete specialized events within the overall allocation optimization sought by Lesaint, and one of ordinary skill would have sought Bergeron to accomplish that after working with Lesaint.

The Appellants next argue that Bergeron does not provide any benefit to Lesaint because it does not make that system any more efficient to reach its intended objectives, and, in fact, it appears at least somewhat contrary to the

intentions of Lesaint, which assumes that once an appropriate individual "reports in," or "calls in," that individual will be assigned the task in question. But Bergeron illustrates the flaw in Lesaint in that personnel may not be in a position to accept a job, as well as the solution to that flaw in interrogating as to acceptance (FF 09). After illustrating this flaw, Bergeron presents the solution in simply asking the personnel to accept the assignment.

The Appellants have separately argued claim 4, arguing that neither reference updates a task status responsive to information from a tracking device. As the Examiner found, Lesaint's handheld devices (Lesaint, Fig. 1) are used to track status (FF 03).

Thus, we cannot say that the Examiner erred in the rejection of claims 1-8 and 10 over Lesaint and Bergeron.

*Claims 12-16, 18, and 20 rejected under 35 U.S.C. § 103(a) as obvious over Lesaint.*

As to claims 12 and 20, which recite the claim limitation that "the communication module automatically generates billing information regarding a task completed by the mechanic" (claim 12), and "automatically generating billing information regarding a task completed by the mechanic" (claim 20), the Examiner takes notice of the commercial nature of the services provided in Lesaint, which implies charging the client, which in turn requires billing. The Examiner concludes that creating a bill promptly is simply good business practice. (Answer 16.) Thus, rather than the Examiner having found the suggestion for billing in the Appellants' teachings, as the Appellants argue, the Examiner simply took notice of the commercial nature of Lesaint's services.

We first notice that neither of these limitations require generating a bill, but merely information related to billing. Certainly calling in via an automated computer automatically generates information for billing purposes. We further notice that Lesaint is, again, directed toward situations allocating tasks to a field force of personnel, such as ambulance or taxi drivers, a vehicle repair call-out field force, or a maintenance field force for a distributed system such as an electricity or water supply system or a telecommunications network (FF 01). Certainly anyone who has ever ridden in a taxi knows that the taximeter, which is the source of the word "taxi," presents an automated billing immediately, and repair and maintenance staff, such as plumbers and electricians, routinely present their bill immediately upon completion of work. Automation of such bill presentation is mere automation of a known manual process (See *Leapfrog* at 1163, *supra.*) Market demand, such as the commercial need to bill for services rendered, may drive design trends. (See *KSR*, *supra).* Thus, one of ordinary skill, upon seeing that Lesaint was applied toward commercial services that routinely present their bill upon work completion, would have found similarly incorporated such billing to be a predictable variation of Lesaint. Hence, we cannot find that the Examiner erred in this rejection.

As to claim 13, the Appellants contend that there is no discussion within the document of giving the mechanic the freedom to accept or decline an assignment. As the Examiner found, Lesaint suggests determining whether the mechanic accepts an assignment of a special service request (Lesaint, col. 5, ll. 15-35, wherein the system determines whether the assigned mechanic has called in or if the request should be assigned elsewhere). (FF 05.) This portion of Lesaint goes on to state that the mechanic is queried as to whether his technical skills and

geographic location are suitable. This implies that the mechanic would not accept the assignment if either were unsuitable. Thus, one of ordinary skill would have understood that in implementing Lesaint, a query as to the suitability for a job should be made, and we cannot find that the Examiner erred in this rejection.

As to claim 15, the Appellants present no reasons for contending the rejection is improper and merely disagree. Hence, we cannot conclude that the Examiner erred in this rejection.

## CONCLUSIONS OF LAW

The Examiner has shown that the combination of Lesaint and Bergeron meets the claim limitations and that it would have been obvious to a person of ordinary skill in the art to have made such a combination to achieve the claimed subject matter. Accordingly we sustain the Examiner's rejection of claims 1-8 and 10 under 35 U.S.C. § 103(a) as obvious over Lesaint and Bergeron.

The Examiner has shown that Lesaint meets or suggests the claim limitations and that it would have been obvious to a person of ordinary skill in the art to have applied Lesaint to achieve the claimed subject matter. Accordingly we sustain the Examiner's rejection of claims 12-16, 18, and 20 under 35 U.S.C. § 103(a) as obvious over Lesaint.

## DECISION

To summarize, our decision is as follows:

- The rejection of claims 1-8 and 10 under 35 U.S.C. § 103(a) as obvious over Lesaint and Bergeron is sustained.

- The rejection of claims 12-16, 18, and 20 under 35 U.S.C. § 103(a) as obvious over Lesaint is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

jlb

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